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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,140	08/21/2001	Luojun Jin	CISCP255/4646	8889

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EXAMINER

DIEP, NHON THANH

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 06/30/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/935,140

Applicant(s)

JIN ET AL.

Examiner

Nhon T Diep

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2; 8/21/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 5-6, 9-10, 13-17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Boice et al (US 5,978,029).

Boice et al discloses a real time encoder of video sequence employing two encoders and a statistical analysis comprising the same MPEG video encoder (col. 3, ln. 50-62), the encoder comprising: means for analyzing statistics from a video stream; means connected to the means for analyzing statistics, for determining if a scene change has occurred (fig. 9, el. 600, 610 and col. 9, ln. 9-20); and means to create a modified video stream if a scene change has occurred (fig. 9, el. 620-660-540) as specified in claims 1, 6, 10, 14-15 and 16; means for analyzing statistics further comprises means for calculating the global complexity of a current frame of a current frame within the video stream (col. 9, ln. 35 – col. 10, ln. 34) as specified in claims 2 and 17; means to create a modified video stream codes a frame with the lowest complexity (B frame) in a fade as an I frame in the modified video stream if a scene change has occurred and the scene change is a fade (col. 11, ln. 16-21) as specified in claims 5, 13-15 and 20.

Claim Rejections - 35 USC § 103

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-4, 7-8, 11-12, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boice et al, in view of Yogeshwar et al (US 6,026,232).

As applied to claims 2, 6, 10 and 16 above, it is noted that Boice et al further discloses that means to create a modified video stream codes the current frame as I frame (col. 10, ln. 35-40); however, Boice does not particularly disclose coding of the previous frame to the current frame as a P frame in the modified video stream, if a scene change has occurred and if the scene change is a scene cut as specified in claims 3, 7, 11 and 18. Yogeshwar et al teaches that the original video is placed at the beginning of the new video to be encoded and is used to create the last P-frame of a GOP before a cut point which is needed to properly encode and decode the first two B-frames of a subsequent GOP. The encoded data from this short initial section is not substituted into the previously encoded data but is used only to create the reference frame (last P-frame) which is referenced by the first two B-frames after the start point. Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Boice et al by coding the last frame of the last GOP or the previous frame of the current intra-coded frame of the current GOP as a P frame. Doing so would help to create the reference frame (last P-frame) which is referenced by the first two B-frames after the cut.

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With regard to claims 4, 8, 12, and 19 which recite a means to create a modified video stream codes the current frame as a B frame in the modified video stream is a scene change has occurred and the scene change is a dissolve as specified in claim 4. It is noted that Boice et al further disclose that dissolve is basically a slow or gradual scene change (col. 10, ln. 42-46), further more, the examiner takes Official Notice that that B frame requires the least amount of bits to code comparing to I and P frames. And therefore, in the case of the scene change is a dissolve, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Boice et al by coding the current frame as a B frame which is using the information of the previous and future frame in the modified video stream is a scene change has occurred. Doing so would help to save bandwidth for coding reference frames.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Linzer (US 6,301,428) discloses a compressed video editor with transition buffer matcher.

b. Shin et al (US 6,381,278) discloses a high accurate and real-time gradual scene change detector and method thereof.

c. Bozdagi et al (US 6,493,042) discloses a feature based hierarchical video segmentation.

d. Sugano et al (US 6,473,459) discloses a scene change detector.

e. de Queiroz et al (US 6,058,210) discloses the method of using encoding cost data for segmentation of compressed image sequences.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhon T Diep whose telephone number is 703-305-4648. The examiner can normally be reached on m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S Kelley can be reached on 703 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ND
22 June 2004



NHON DIEP
PRIMARY EXAMINER